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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,108	04/14/2004	Marcel Boucher	78.1178	3107
26932	7590	03/27/2006	EXAMINER	
JEFFREY E. DALY GRANT PRIDECO, L.P. 400 N. SAM HOUSTON PARKWAY EAST SUITE 900 HOUSTON, TX 77060			TSAY, FRANK	
			ART UNIT	PAPER NUMBER
			3672	

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/709,108		BOUCHER ET AL.	
	Examiner		Art Unit	
	Frank S. Tsay		3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/10/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities: In line 4, the language "on the on the" appears to be in error. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-23, 25-31, and 33-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Zaleski, Jr. et al (US5,813,480).

Zaleski, Jr. et al discloses a method and apparatus for monitoring the operation of downhole drill bit which comprises everything including a drill bit 20 having a plurality of transducers 201, 207, 213, 219 on the bit for communicating pressure, temperature, strains, and acceleration of bit body respectively (Figs 8A-8G, and col. 11, lines 11-65). The analog multiplexer situated on the bit is anticipated by monitoring system 225 where multiplexer is located for receiving output from the sensor or transducers and transmitting the multiplexed outputs (See Fig. 9).

- The drill bit of Zaleski, Jr. et al can be either a roller-cone bit or a fixed cutter bit (Fig. 3 or Fig. 10)

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- The filter, power circuit, the timing circuit and transmission circuitry are anticipated by col. 4, lines 26+, (where data transmission subassembly is taught); col. 5, lines 9+, (where electric power circuit is taught); col. 11, lines 30+, (where a timing circuit is taught), and col. 12, lines 15+, (where a filter is taught).
- The plurality of transducers and multiplexers are anticipated by the multiple sensors or transducers including temperature, pressure, trains, and accelerometers sensors or transducers which require plurality of multiplexers for receiving and transmitting the analog signals.
-

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zaleski, Jr. et al in view of Van Steenwyk et al (US 4,471,533).

Zaleski, Jr. et al teaches everything with the exception of means for filtering un-multiplexed analog signals. In this regard, Van Steenwyk et al teaches a well surveying system which comprises a circuitry including means for filtering multiplexed or non-multiplexed output signals so that the signals from sensors or transducers can be transmitted and synchronized (col. 9, lines 50-65). It would therefore have been

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obvious to one of the ordinary skill in the art at the time of invention was made to have further modified Zaleski, Jr. et al downhole monitoring system to further include Van Steenwyk et al filtering means so that un-multiplexed or non-multiplexed signals can be further filtered and transmitted.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dawson et al '774, and MacLeod all teach downhole drill bit sensing and apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank S. Tsay whose telephone number is (571) 272-7038. The examiner can normally be reached on Monday thru Friday, 7:30am-5:00 pm, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on (571)272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Frank S Tsay
Primary Examiner
Art Unit 3672

3/22/06